

■ GENERAL

A-100 series is direct indicating type variable area flowmeter with metal tapered tube.

It is widely used for measurement of flow rate of liquids and gases in various applications.

Moreover, it is highly acclaimed for its high accuracy, superior durability and corrosion resistance, and simple installation and maintenance.

■ STANDARD SPECIFICATION

- Available size : 15 to 150
- Measuring range : Water Min. 0.01 to 0.1m³/h (15mm)
Max. 20.4 to 204m³/h (150mm)
Air Min. 0.3 to 3m³/h (nor) (15mm)
Max. 641 to 6410m³/h (nor)(150mm)
- Rangeability : 10:1
- Fluid Temp. : Max. 120°C (Allowable thermal shock 80°C)
- Fluid pressure : (MPa)

Model \ Size (mm)	15	20	25	40	50	65	80	100	125	150
A-102 A-103	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Use AM or M series for the higher pressure services more than above.

- Process connection : JIS 10K RF, ANSI 150 RF Flange
- Process connection flange sizes

	A-□□2	A-□□3
-1 size	○	○
±0 size	○	○
+1 size	○	○

+1 size means 1 rank larger connection size than meter.
±0 means same size. -1 means 1 rank smaller size.

- Accuracy : ±1.5% F.S.
- Alarm contact : A-75□ version is ready
- Alarm point : 1 point or 2 points
- Switch type : Self-holding type reed switch
- Contact capacity : AC, DC10VA / 10W (Load resistance)
Max.voltage of output contact:AC120V, DC170V
Max.current of output contact:AC0.25A, DC0.25A
(Be careful of inrush current, surge voltage, etc.)
- Alarm setting accuracy : ±2% F.S. ±2% F.S. (of the flow rate)
- Reset span : Within 15% F.S. ±2% F.S. (of the flow rate)
- Construction : Waterproof
- Paint color : Munsell 7.5BG4/1.5 (except for the SUS body)



■ MODEL CODE

Model code				Description
A-				
Function	1 0			Local indication
	7 5			Local indication + Alarm output
Flow direction		2		Bottom to Top side
		3		Bottom side to Top side
Additional function		-	D	Damper*1

*1 Damper is available for A-□□3 for gas measurement.

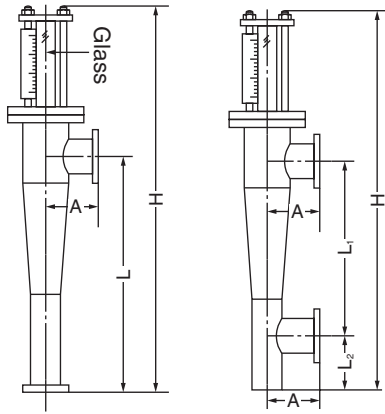
Cautions to select flowmeter when using glass for pressure containing part

⚠ CAUTION

When selecting flowmeter, for which glass is used for pressure containing part, the following points shall be taken into consideration.

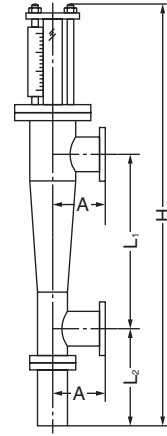
- Liquid services subject to impulse pressure in the process.
- Secondary accidents might occur due to the breakage of glass in such services :
 - Toxic fluids such as poisons, stimulant and narcotics
 - Flammable fluids
 - Explosive fluids
- Gas handling process where breakage of glass might result in gas leakage or scattering of glass fragments.
- The installation places of the flowmeters where breakage of glass might be caused by the accidents from the surrounding piping or equipment.
- On-off operation where breakage of glass might be caused by the collision of the float inside meter due to the abrupt change of flow.
- Services where the heat shock by abrupt change of temperature is expected.

DIMENSIONS and FLOW RATE



A-102

A-103

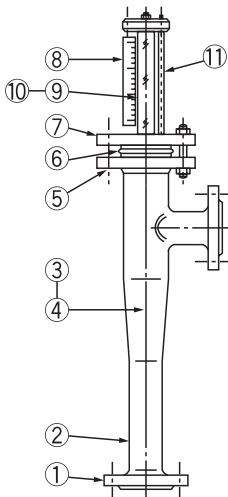


A-103-D (For Gas measurement with damper)

Meter Size	Flow rate (water) and pressure loss		Dimensions (mm)								Mass (Approx.) kg	
	m ³ /h	Press loss (kPa)	A-102			A-103			A-102	A-103		
			L	A	H	L ₁	L ₂	A			H	
15	0.1-0.51	4.4	300	80	600	300	40	80	640	5.5	5.5	
20	1.58	4.6	350	100	660	350	40	100	700	6.0	6.0	
25	3.70	5.2	350	100	680	350	60	100	740	7.5	8.0	
40	7.30	5.4	380	130	700	380	60	130	760	11.0	12.0	
50	16.80	6.5	420	130	760	420	80	130	840	14.0	15.0	
65	27.00	7.1	460	150	820	460	80	150	900	19.0	20.0	
80	41.40	9.0	480	150	840	480	100	150	940	23.0	24.0	
100	85.20	9.8	550	200	940	550	120	200	1060	39.0	41.0	
125	134.00	10.5	570	250	980	570	120	250	1100	60.0	65.0	
150	204.00	11.5	590	250	1000	590	140	250	1140	75.0	80.0	

Meter Size	Flow rate (air) and pressure loss		Dimensions (mm)				Mass (Approx.) kg
	Max. Flow rate m ³ /h (nor)	Press loss (kPa)	A-103-D				
			L ₁	L ₂	A	H	
15	3-21	4.9	220	240	80	740	5.5
20	54	5.2	250	240	100	800	6.5
25	110	5.3	270	260	100	840	9.0
40	250	5.5	310	280	130	900	13.0
50	570	6.5	360	340	130	1040	17.0
65	910	7.3	400	360	150	1100	26.0
80	1410	8.9	440	360	150	1160	32.0
100	2830	10.0	500	380	200	1260	45.0
125	4340	11.0	530	400	250	1340	65.0
150	6410	12.0	560	400	250	1380	85.0

MATERIAL



NO	Parts name	A-102, 103		
		1	2	3
1	Flange	SS400	SUS304	SUS316
2	Body	STPG370	SUS304	SUS316
3	Float ass'y	SUS304		SUS316
4	Taperd tube	SUS304		SUS316
5	Bolt & nut	SS400 or SUS304		
6	Packing	NON-ASBESTOS or PTFE		
7	Upper flange	SS400	SUS304	SUS316
8	Scale plate	A1050P (Aluminum)		
9	Sight glass	Heat-resistant glass (Acryl is available on request)		
10	Sight glass packing	NBR (FPM is available on request)		
11	Column	SS400 (SUS304 is available on request)		

Note) Contact Tokyo Keiso about glass lining, hard rubber lining, ETFE lining and PVC lining for corrosive liquids.

* Specification is subject to change without notice.

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